

WHAT IS CLAIMED IS:

1. A method of fabricating at least a honeycomb ceramic body comprising a multiplicity of cells having the wall thereof not more than 0.125 mm thick, in which
5 at least an extrusion-molded argillaceous honeycomb body placed on a conveyance tray of porous ceramic having a dielectric loss of not more than 0.1, a porosity of not less than 10 % and a sectional open area ratio of not
10 less than 50 % is dried by being exposed to a high humidity ambience of not less than 70 % in humidity and irradiated with microwaves in the frequency range of 1,000 to 10,000 MHz.
2. A method of fabricating at least a honeycomb body according to claim 1, wherein said honeycomb body is
15 placed on a conveyance tray with one of the open ends of each cell of said mold kept in contact with the upper surface of said conveyance tray.
3. A method of fabricating at least a honeycomb body according to claim 1, wherein the conveyance tray is
20 made of foamed urea resin.
4. A method of fabricating at least a honeycomb body according to claim 1, wherein a plurality of honeycomb bodies are dried with adjacent ones thereof placed at predetermined spatial intervals.
- 25 5. A method of fabricating at least a honeycomb body according to claim 1, wherein a plurality of the honeycomb bodies are dried while changing the conditions for microwave radiation in accordance with the quantity of the honeycomb bodies.
- 30 6. A drying system for fabricating at least an extrusion-molded argillaceous honeycomb body of ceramic composed of a multiplicity of cells arranged in the shape of a honeycomb with the cell wall not thicker than 0.125 mm, said drying system comprising:
35 a drying bath for accommodating a plurality of the honeycomb bodies;
a humidifier for creating a high-humidity

10045085-011500

ambience of not lower than 70 % in humidity in said drying bath;

a plurality of microwave generators for supplying the microwave in the frequency range of 1000 to 10000 MHz into the drying bath; and

a conveyor system for supplying and delivering a plurality of the honeycomb bodies continuously to and from said drying bath.

7. A drying system according to claim 6, wherein said drying bath includes openings for supplying and delivering a plurality of the honeycomb bodies into and out of the drying bath continuously, and shield means for preventing the high-humidity air in the drying bath from mixing with the atmospheric air at said openings.

8. A drying system according to claim 7, wherein the shield means is so configured as to shield the high-humidity ambience in the drying bath from the external atmosphere by forming an air flow for shielding the openings.

9. A drying system according to claim 7, comprising means for changing the conditions for microwave radiation in accordance with the quantity of the honeycomb bodies existing in the drying bath.

10. A drying system according to claim 7, comprising an accumulator function for adjusting the supply of the honeycomb bodies in such a manner that the honeycomb bodies supplied into the drying bath are arranged at equal spatial intervals.

11. A drying system according to claim 7, comprising a plurality of ports for introducing microwaves.

12. A drying system according to claim 11, comprising a first introduction port formed in the neighborhood of the opening for supplying the honeycomb bodies into the drying bath and a second introduction port formed in the neighborhood of the opening for delivering the honeycomb bodies out of the drying bath,

10045085-011502

wherein said first introduction port is so configured as to radiate microwaves toward the opening for delivering out the bodies and the second introduction port is so configured as to radiate the microwave toward the opening for supplying the bodies.

13. A drying system according to claim 11, comprising a first introduction port formed above the opening for supplying the honeycomb bodies into the drying bath and a second introduction port formed below the same opening, wherein said first introduction port and said second introduction port are so configured as to radiate microwaves toward the opening for delivering the honeycomb bodies out of the drying bath.

14. A drying system according to claim 11, comprising a first introduction port formed on the upper portion of the drying bath and a second introduction port formed in the lower portion of the drying bath, wherein the first introduction port is so configured as to radiate microwaves toward the lower portion of the drying bath and the second introduction port is so configured as to radiate microwaves toward the upper portion of the drying bath.

15. A drying system according to claim 11, comprising a first introduction port and a second introduction port arranged on the two inner sides of the drying system in opposed relation to each other with the conveyor system therebetween, wherein the first introduction port is configured to radiate microwaves toward the side of the drying system having the second introduction port, and the second introduction port is configured to radiate microwaves toward the side of the drying system having the first introduction port.

16. A method of fabricating at least a honeycomb ceramic body comprising a multiplicity of cells arranged in the shape of a honeycomb and having the wall thereof not more than 0.125 mm thick, in which a plurality of extrusion-molded argillaceous honeycomb bodies are dried

10045085.011502

by being exposed to a high humidity ambience of not less than 70 % in humidity and irradiated with microwaves in the frequency range of 1,000 to 10,000 MHz, after which hot air is applied to said honeycomb bodies in such a manner as to pass through the cells thereof.

17. A method of fabricating at least a honeycomb ceramic body according to claim 16, wherein the temperature of said hot air is 50 to 140°C.

18. A method of fabricating at least a honeycomb ceramic body according to claim 16, wherein said honeycomb body is dried by applying the hot air thereto after the water content of the honeycomb body is reduced to 5 to 30 % by weight by radiation of the microwave.

19. A method of fabricating at least a honeycomb ceramic body according to claim 16, wherein said honeycomb body is dried by applying cool air after hot air is applied thereto.

20. A method of fabricating at least a honeycomb ceramic body according to claim 19, wherein the temperature of the cool air is 0 to 30°C.

21. A system for drying at least an extrusion-molded argillaceous honeycomb body to fabricate at least a honeycomb body of ceramics composed of a multiplicity of cells arranged in the shape of a honeycomb with the cell wall not thicker than 0.125 mm, said drying system comprising:

a drying bath for accommodating a plurality of honeycomb bodies;

a humidifier for creating a high-humidity ambience of not lower than 70 % in humidity in the drying bath;

a plurality of microwave generators for supplying microwaves in the frequency range of 1,000 to 10,000 MHz into the drying bath; and

a hot air generator for generating hot air to be applied to said honeycomb bodies in or outside said drying bath.

10045085-01502

22. A system for drying at least a honeycomb ceramic body according to claim 21, wherein said hot air generator includes a hot air source for generating the hot air in the temperature range of 50 to 140°C.

5 23. A system for drying at least a honeycomb ceramic body according to claim 21, comprising a cool air generator arranged inside or outside the drying bath for generating the cool air to be applied to said honeycomb body.

10 24. A system for drying at least a honeycomb ceramic body according to claim 23, wherein said cool air generator includes a cool air source for generating the cool air in the temperature range of 0 to 30°C.

10045085-011502